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TREC trade in the European Green Power Market

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Conference

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**TRECKIN project supported
by the European Commission**

Overview

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- CEA in a nutshell
- The TRECKIN network
- European & MS RE policies
- The Dutch Case
- TREC systems in Europe
- Lessons learned



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CEA in a nutshell

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- Dutch consultancy with 25 years of experience in Energy Efficiency and Renewable Energy
- Based in Rotterdam and Arnhem
- 35 consultants
- Typical projects:
 - (Local) Climate Policy, TRECs, Environmental management, EPA
 - 80% domestic; 20% International (EU)

TRECKIN network

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- Tradable Renewable Energy Certificates Knowledge & Information Network
- Consortium (5 parties) funded by the EU
- Contact points around the world
- Website, Newsletter, Dissemination & ‘Acceleration’ events
- Guidance Packages and Case Studies
- www.TRECKIN.org



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EU RE-related policy

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- 1996: Electricity Directive (+amendments)
 - full, market opening in 2007, unbundling
- 2002: Directive on Buildings Energy Performance
- 2003: Directive on electricity disclosure:
 - deadline July 2004
- Emissions Trading starting in 2005



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Specific EU RE policy

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- 2001: State Aid Directive
 - Friendly for support to RES-E
- 2001: RES-directive
 - guaranteed grid access for RES-E
 - Guarantee of Origin in place in Oct. 2003
 - Indicative targets for 2010



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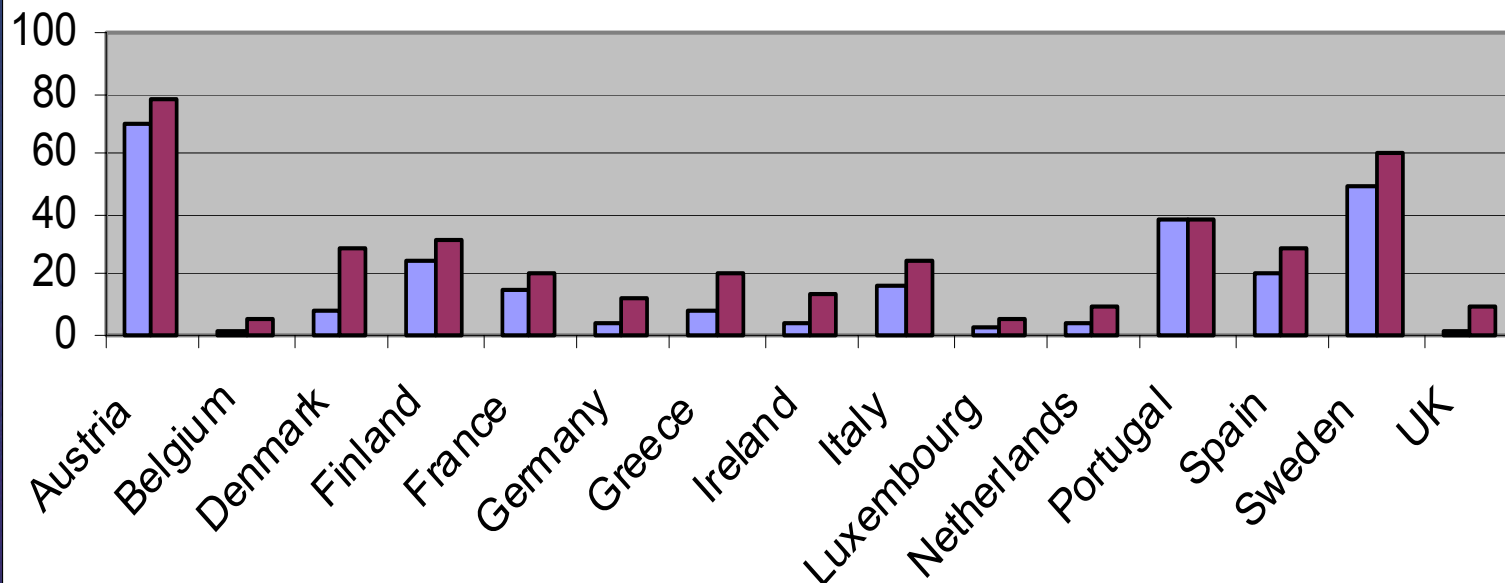


Targets EU-15

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EU-15, from 14% in 1997 to 22% in 2010

■ 1997 RES-penetration ■ 2010 RES_E penetration



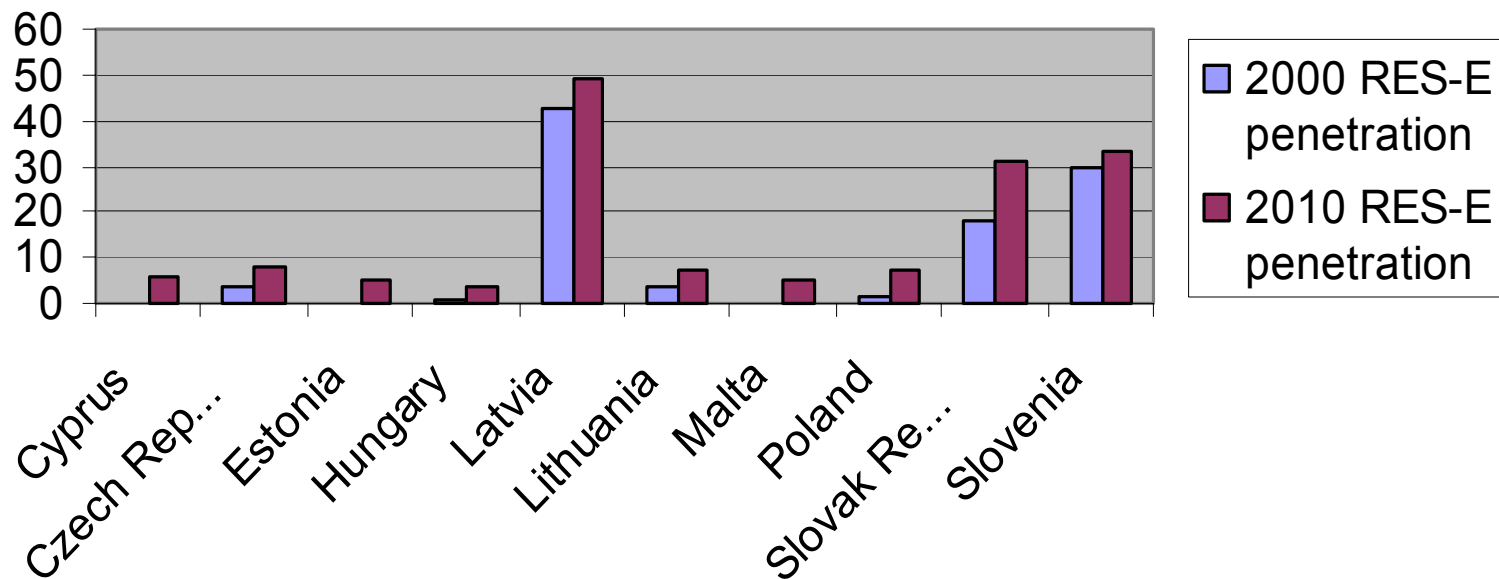
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Targets EU-25

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New Acceding countries from 5.6% in 2000 to 11% in 2010



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EU motives for RES-E

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- Reduce energy imports dependence
 - dependency threatens to grow from 50% to 70%
- Diversification
- Environmental concerns CO₂, but also SO₂ & NO_x
- Socio-economic concerns: creating local jobs
- Industry & technology policies
- Creating a home market
- ‘Kyoto’ not the only, but a major driver



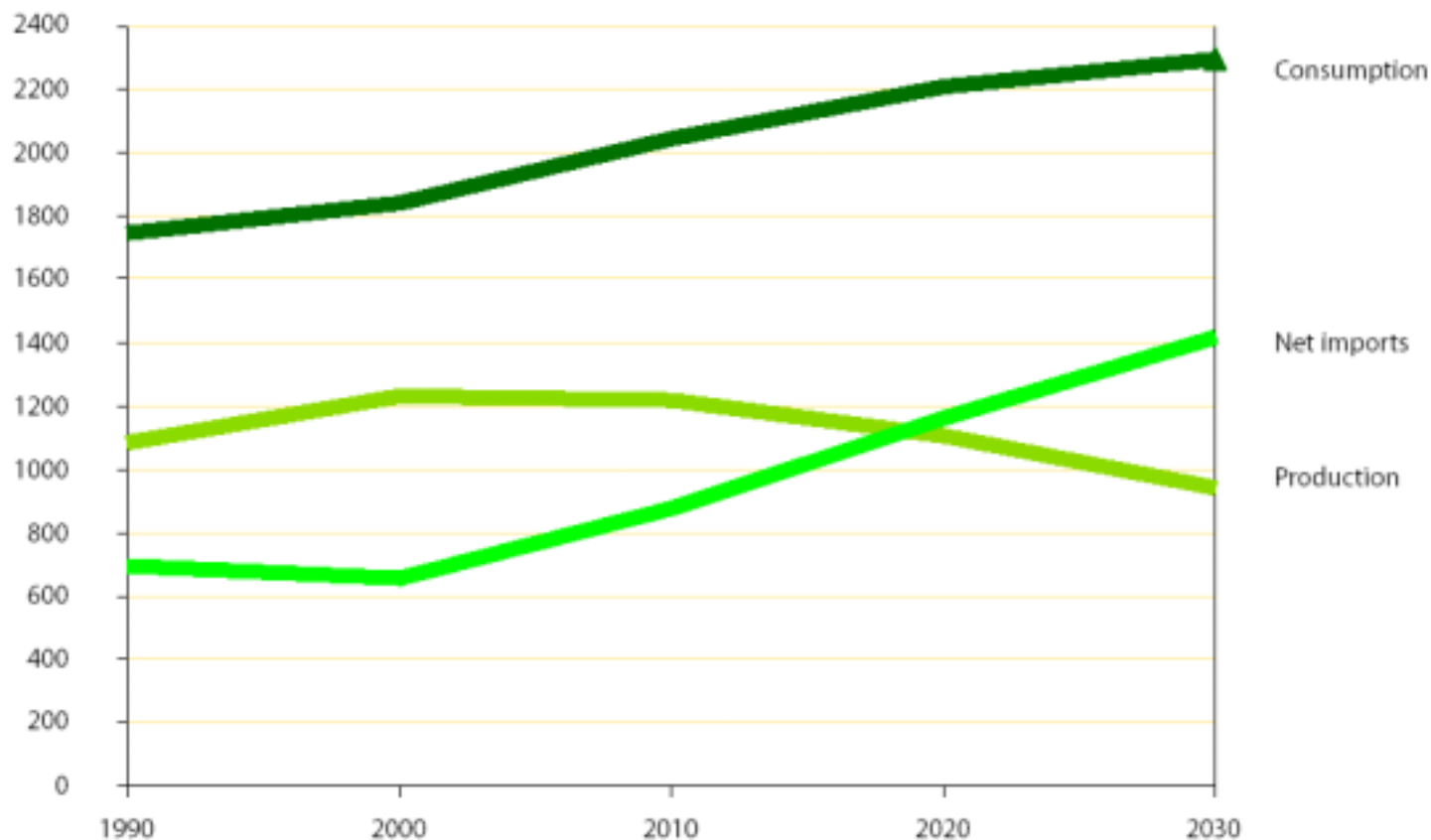
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Dependency...

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EU-30 — Total energy (in million toe)



Source: Greenpaper on security of supply. 2000



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Countries \ Schemes	Investment Subsidies	Feed-in	Quota Obligation	Tendering / Bidding	Fiscal or Financial	Green Pricing
Austria						
Belgium			2002-All			
Denmark			*2004-All			
Finland						
France						
Germany						
Greece						
Ireland						
Italy			2002-All			
Luxembourg						
Netherlands		MEP - 2003 REB				
Portugal						
Spain						
Sweden			2003-All			
UK			2002-All	Ended 2002		

Source: Green-x-project, 2003

Conclusions RE policy

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- **EU**
 - Policy focussed on R&D, implementation, demonstration, dissemination
 - Direct EU market stimulation coming from the EC
 - RES-E serves multiple policy goals
 - Only “indicative” RES-E targets
 - EU Harmonisation unlikely, and not before 2005
- **Individual member states:**
 - Different ambition levels
 - Great diversity in National RE-policies
 - Differing views on allowing cross border trade of RES-E or certificates
- **No clear movement towards a Green Power Market, due to differing national interests and policies**

The Dutch Tax exemption case

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- Policy:
 - energy tax on ‘grey’ electricity
 - tax facilities on green (max. 8ct/kWh preference)
 - 100% liberalisation of green market
 - open to imports
- Consequences:
 - 2.2 million green customers (Oct 2003: 32%)
 - New products, new (green) suppliers, aggressive marketing
 - Large imports of green certificates (80%); mainly from existing plants
 - Lack of new Dutch investments



‘Repaired’ Dutch Policy

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- Gradually disappearing tax exemption
- Feed in tariffs
 - fixed for first 10 years after realisation
 - 4.8 ct/kWh for wind onshore
 - 6.9 ct/kWh for wind offshore, solar, tidal etc.
 - 2.9 ct/kWh for waste and biomass
- Borders remain open
- Certificates used for feed in tariffs
- *Consumer prices will be less competitive*
- *Imports will drop close to zero*



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European Green Power Market...

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*Does a real European Green
Power Market exist or is it
likely to develop?*



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Overview of current TREC systems

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- UK: ROCS (quota obligation) & LECs (tax exemption)
- NL: green certificates (tax exemption & feed-in tariff)
- Germany: some imports for the voluntary markets.
- Sweden: Elcert. Feed in tariff, Quota obligation and fines.
- Switzerland & Finland: no national system, but large exporters of RECS-certificates
- Italy: green certificates for obligation
- Austria: voluntary market & disclosure
- Belgium: quota obligation
- Pan-European: RECS. Exchange platform for national TREC-schemes



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Current X-border TREC trades in EU

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- Specific isolated TREC flows:
 - Into the Netherlands (because of tax exemption)
 - Into Germany for the voluntary market
 - In and out of Austria for the voluntary market, influenced by full disclosure
- And, indeed: some lively domestic markets (Austria, Netherlands, UK)



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Lessons (to be) learned

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- Level playing field absolutely necessary (but hard to reach across MSs, as long as the European Commission does not take action)
- Demand stimulation can create a lively and successful domestic market (Dutch case)
- Full disclosure stimulates domestic demand (Austrian case)



Conclusions

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- A true European Green Power Market is still a long way: Regional Multinational RE markets likely to develop (Norway - Sweden Common RE Market)
- Implementation of the Guarantee of Origin will help (but not enough)
- The RECS initiative provides a working exchange platform for diverse TREC-systems



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Thank you for your attention!

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Some interesting resources:

On TREC systems:

- www.treckin.com
- www.recs.org

On RE policy (interactions):

- www.setrec.info
- www.green-x.at

On disclosure:

- www.electricitylabels.com



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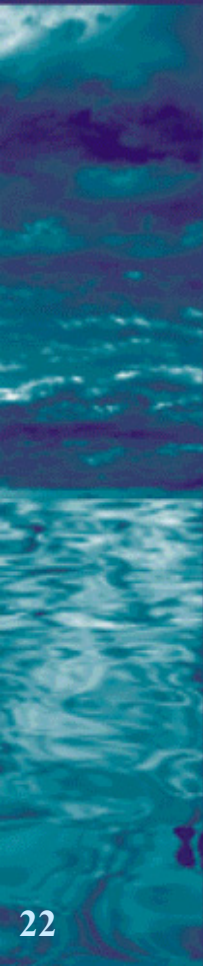
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Some spare slides...

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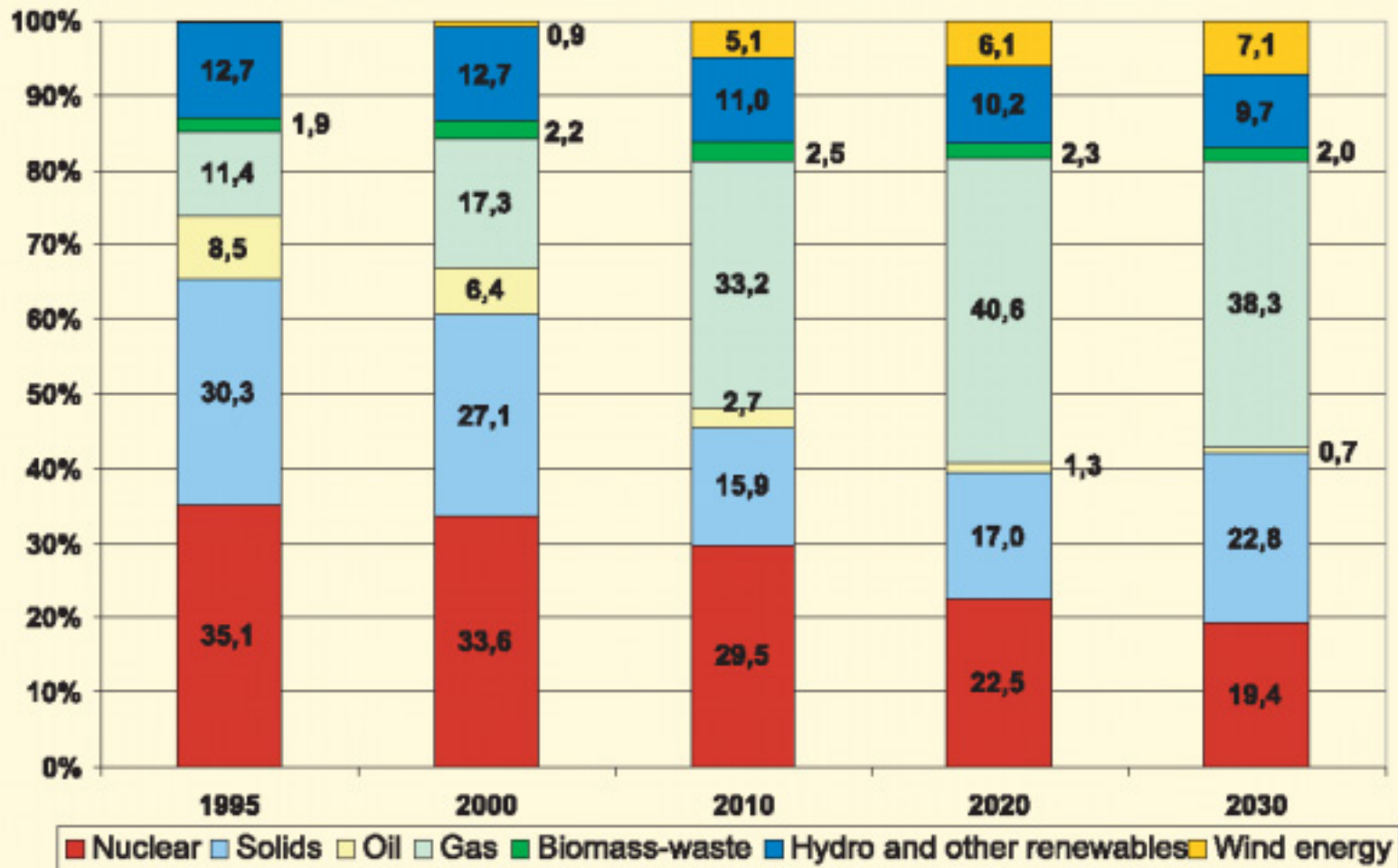
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Will the targets be met?

Primes-scenario study 2003

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Figure 2-18: Shares of fuels in electricity generation in EU

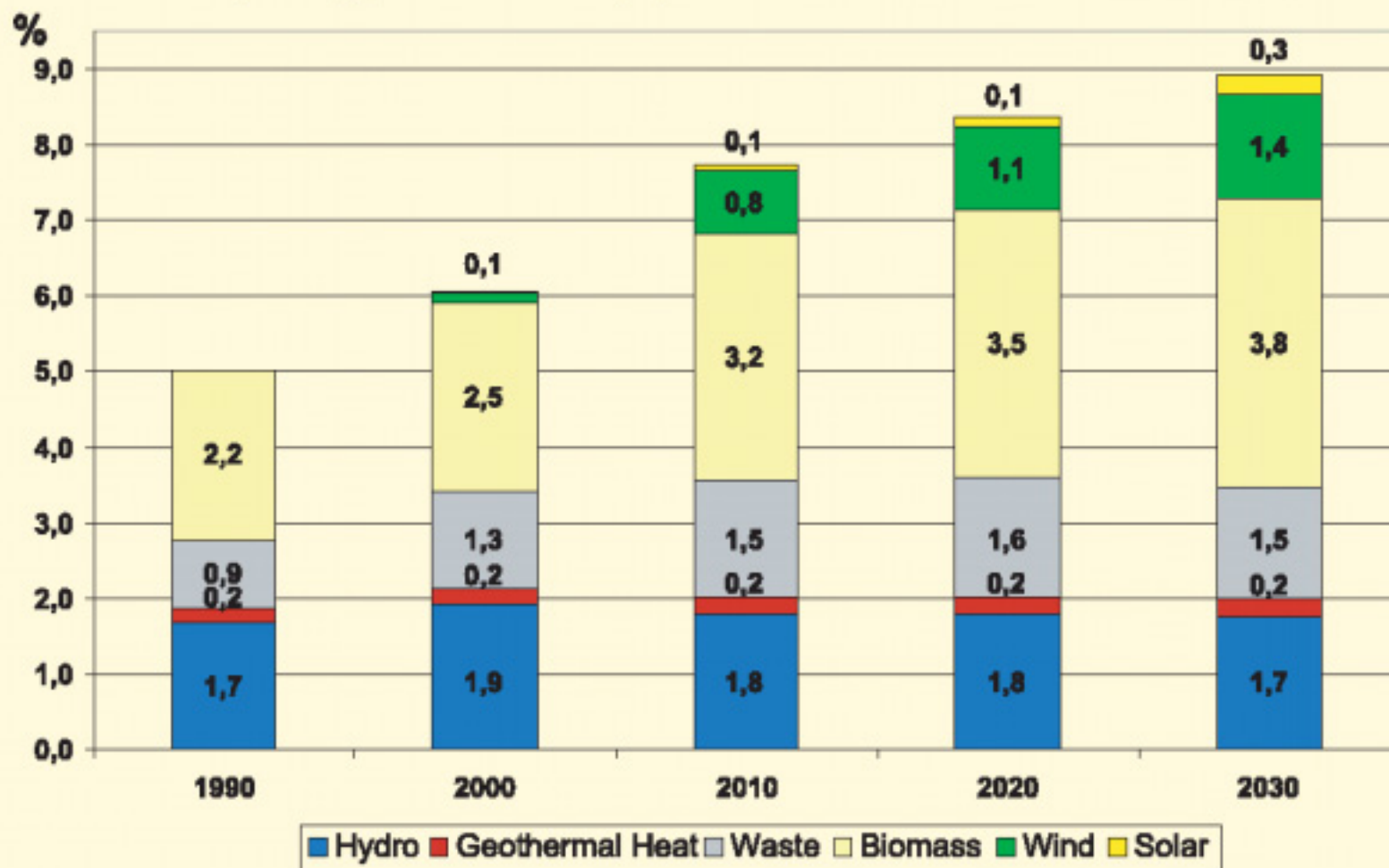


Will the targets be met?

Primes-scenario study 2003

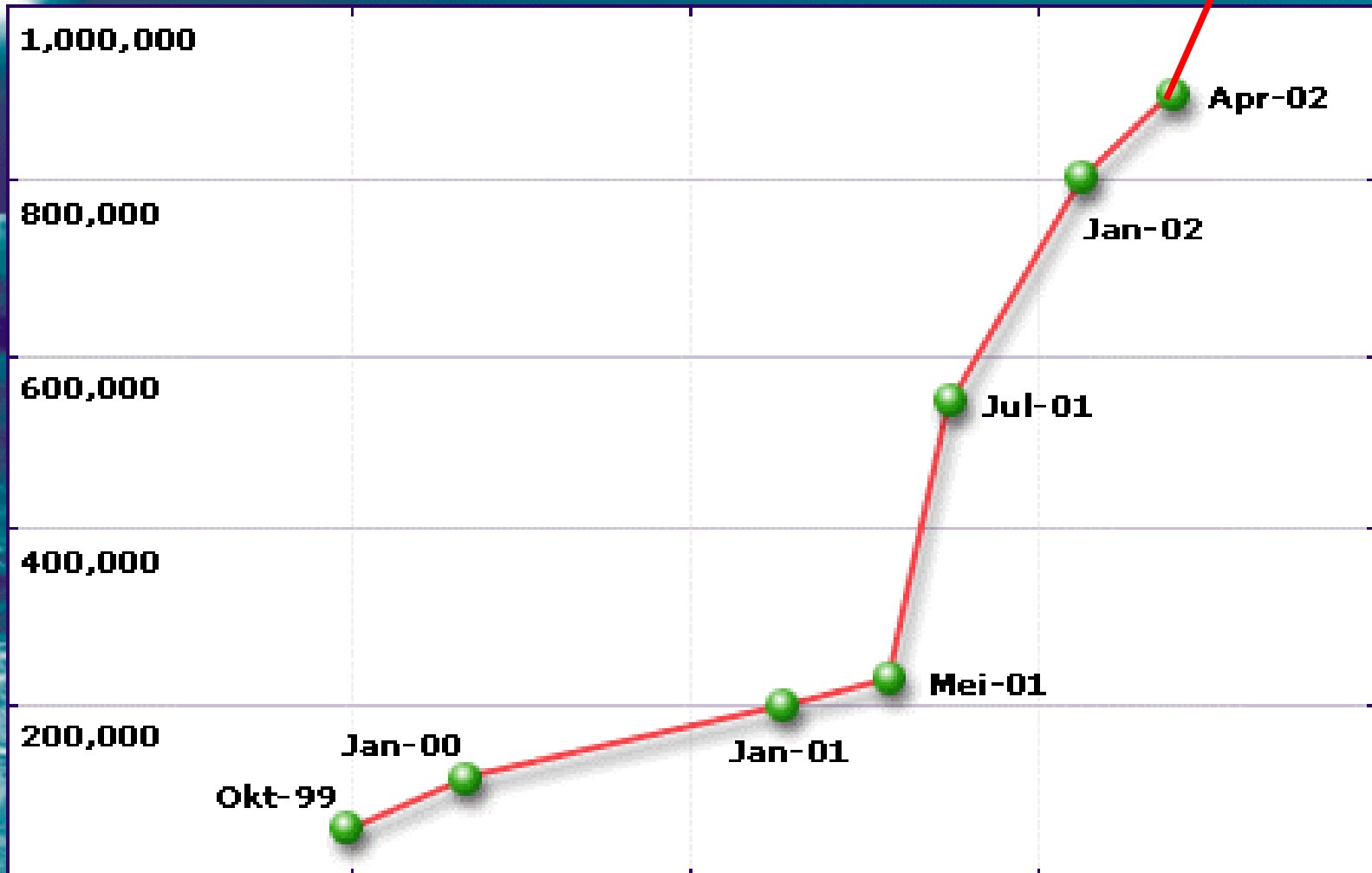
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Figure 2-4: Percentage contribution of renewable energy forms in Primary Energy Demand in EU (%)



Dutch Green Power Customers (latest figure: 2.2. Million)

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Dutch Green Certificates

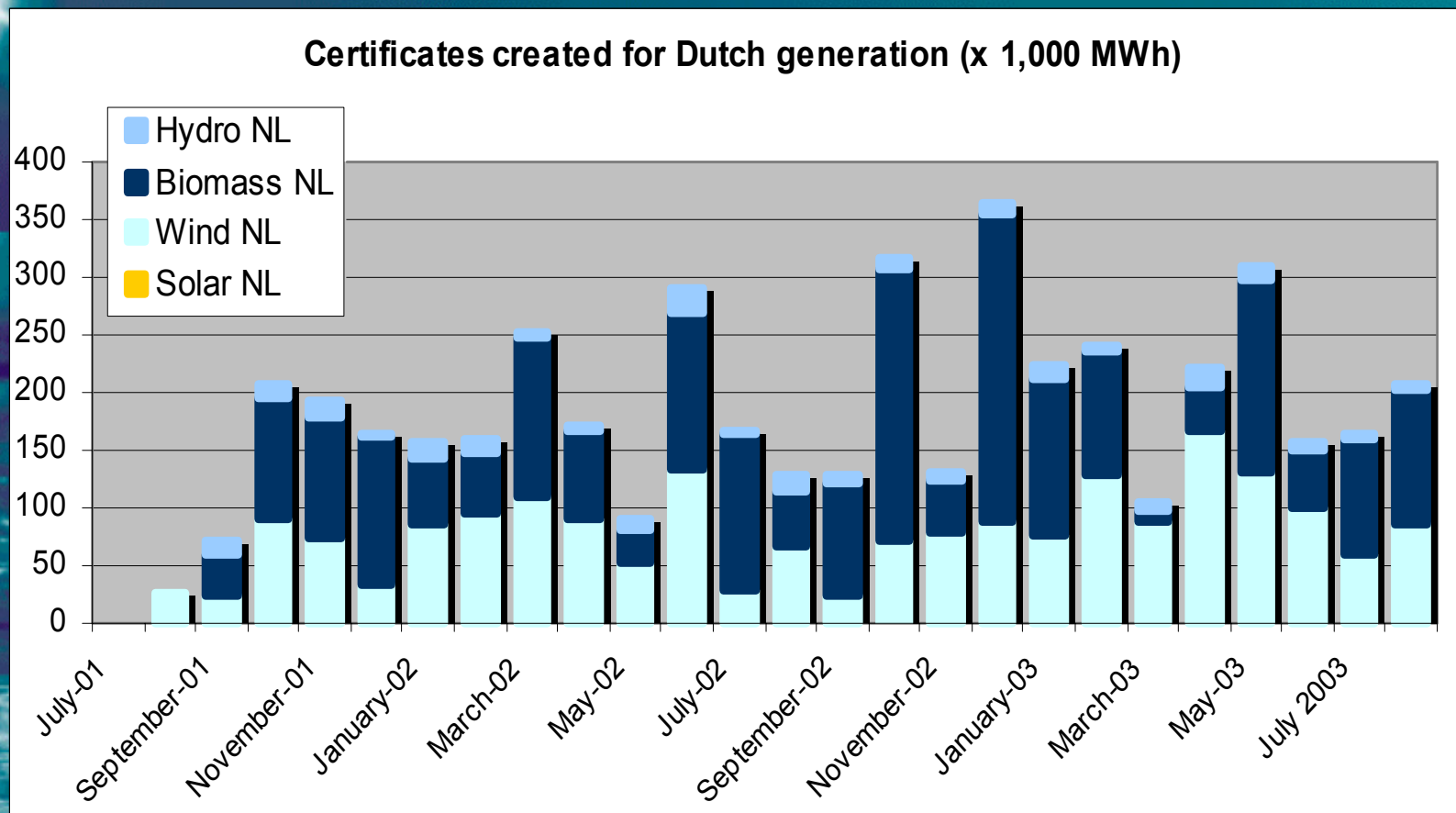
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Participants in the system		Per 2-9-2003	
Number of grid connections (producers)	Netherlands	Total	1.054
		Biomass	74
		Hydro	11
		Solar	216
		Wind	753
	Abroad	Total	839
		Biomass	111
		Hydro	299
		Solar	0
		Wind	429
Number of traders			67
Number of aggregators			18



Dutch statistics 1

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Source: CertiQ (Dutch Green Certificate Issuing Body)

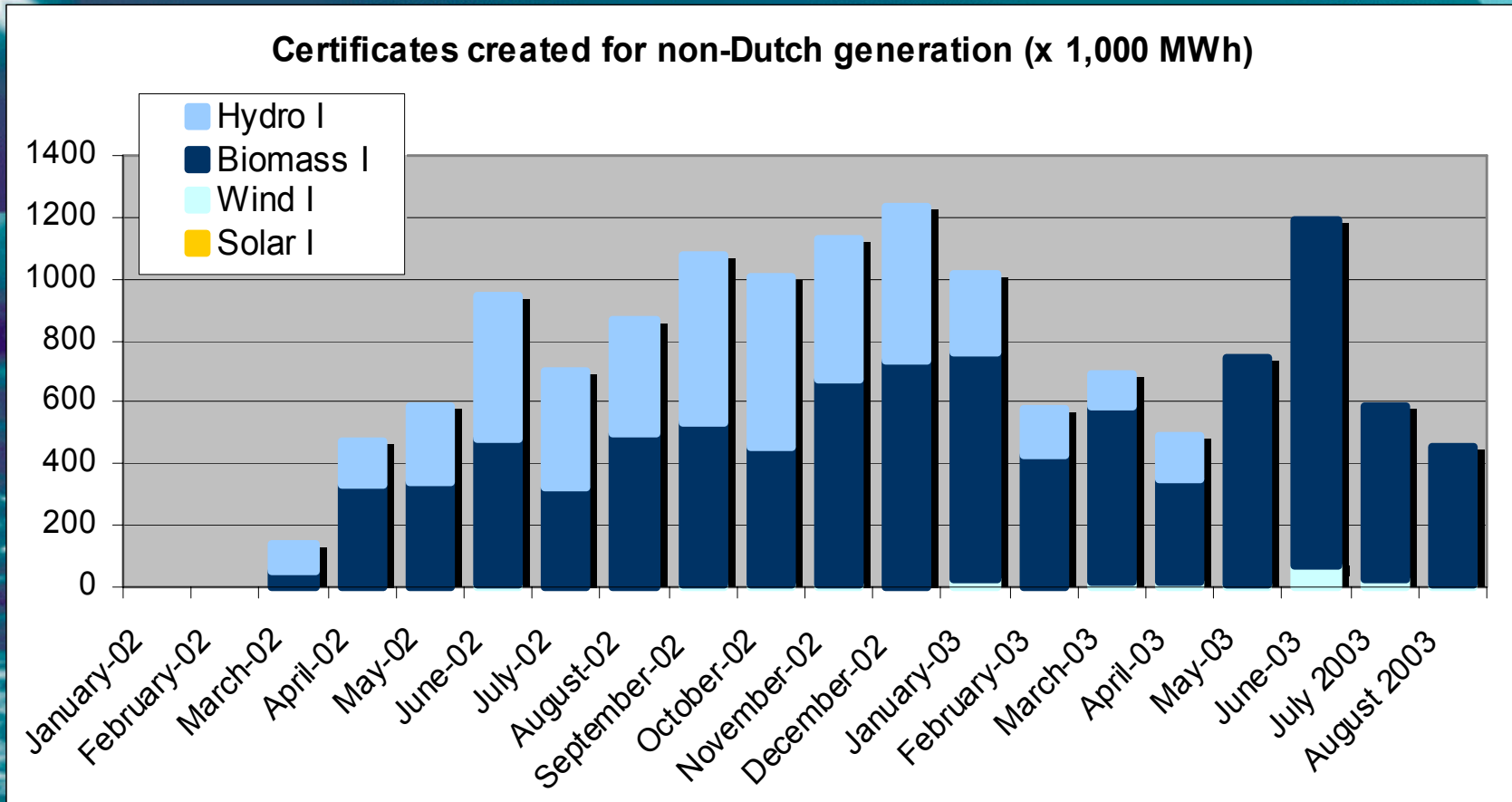


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Dutch statistics 2

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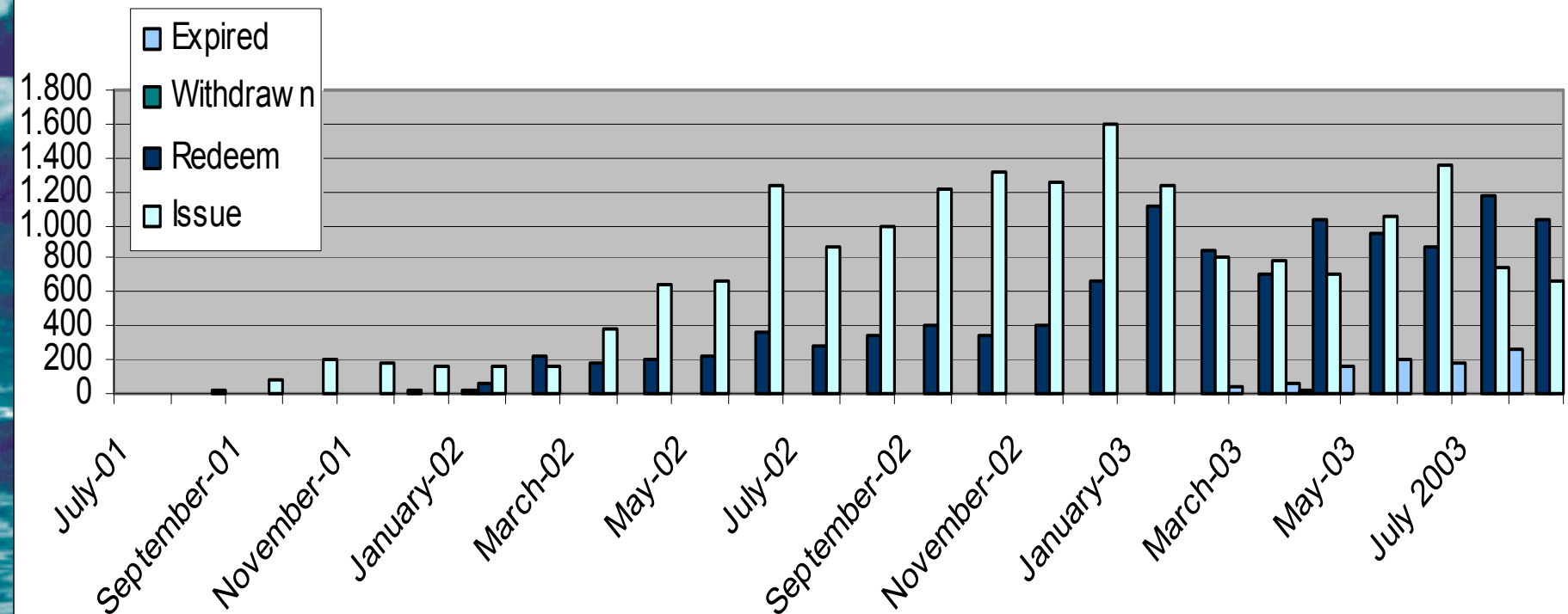
Source: CertiQ (Dutch Green Certificate Issuing Body)



Dutch statistics 3

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Activities within the system (x 1.000 MWh)



Source: CertiQ (Dutch Green Certificate Issuing Body)



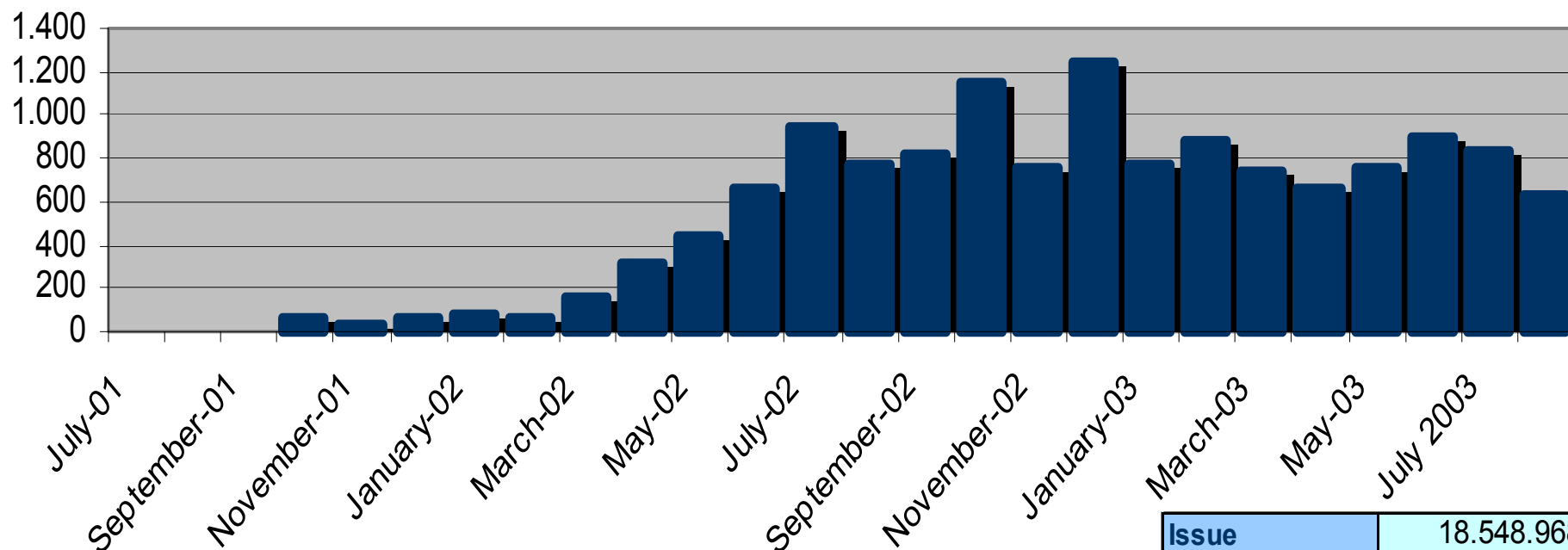
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Dutch statistics 4

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Amount of transfers per month (x 1.000 MWh)



Source: CertiQ (Dutch Green Certificate Issuing Body)

Issue	18.548.968
Redeem	11.397.700
Expired	910.264
Withdrawn	57.409
Valid	6.183.595



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